ENVIRONMENTAL QUALITY

STRATEGIC GOAL

Aggressively clean up the environmental legacy of nuclear weapons and civilian nuclear research and development programs, minimize future waste generation, safely manage nuclear materials, and permanently dispose of the Nation's radioactive wastes.

OBJECTIVES

EQ1: ***Reduce the most serious risks from the environmental legacy of the U.S. nuclear weapons complex first.***

EQ2: ***Clean up as many as possible of the Department's 53 remaining contaminated geographic sites by 2006.***

EQ3: ***Safely and expeditiously dispose of waste generated by nuclear weapons and civilian nuclear research and development programs and make defense high-level radioactive wastes disposal-ready.***

EQ4: ***Prevent future pollution.***

EQ5: ***Dispose of high level radioactive waste and spent nuclear fuel in accordance with the Nuclear Waste Policy Act as amended.***

EQ6: ***Reduce the life-cycle costs of environmental cleanup.***

EQ7: ***Maximize the beneficial reuse of land and effectively control risks from residual contamination.***

The Department of Energy is committed to completing as much cleanup as possible by 2006 of the Nation's sites contaminated from nuclear weapons research, production, and testing. Achieving our accelerated site completion goals will require the Department to improve productivity and reduce the life-cycle costs of cleanup. The geographic site completion goals are based on the Environmental Management (EM) Program's most aggressive budget and planning scenarios and assume the maximum possible gains in efficiency. At some of these sites, these goals are extremely ambitious and represent challenges rather than specific commitments. The 2006 planning and the budgeting processes serve as the basis for the EM commitments in this Performance Agreement.

Even after completing cleanup, the Department will maintain a presence at most sites to ensure that the reduction in risk to human health and the environment is maintained. Such "long-term stewardship" will include passive or active institutional controls and, often, treatment of groundwater over a long period of time.

The following commitments and measures of success describe our most significant results for FY 1998 towards the Environmental Quality strategic goal and objectives.

OUR COMMITMENTS

EQ1: ***Reduce the most serious risks from the environmental legacy of the U.S. nuclear weapons complex first.***

EQ1-1 REDUCING WORKER, PUBLIC, AND ENVIRONMENTAL RISKS

Identify and fund projects to reduce the most serious risks first and prevent further increases in relative risk at all sites. **(EM)**

" *Success will be measured in FY 1998 by:*

- ! *Stabilizing and safely storing about 3.7 metric tons of heavy metal of spent nuclear fuel (SNF).* [*Note: SNF data excludes information that is controlled or classified.*]
- ! *Stabilizing approximately 20,000 kilograms bulk of plutonium residue and approximately 7,000 liters of plutonium solution, and safely storing stabilized material.*
- ! *Closing one high level waste storage tank at the Savannah River Site.*

EQ2: ***Clean up as many as possible of the Department's 53 remaining contaminated geographic sites by 2006.***

EQ2-1 ACCELERATE AND COMPLETE GEOGRAPHIC SITE CLEANUP

[Covers strategies 1,2 and 3]

Clean up as many as possible of the Department's 53 remaining contaminated geographic sites by 2006[1]. Accelerate and complete cleanup of 9 large geographic sites by 2006, including the Fernald Environmental Management Project, Mound Plant, Rocky Flats Environmental Technology Site, Portsmouth Gaseous Diffusion Plant, West Valley Site, Weldon Spring Site, Brookhaven National Laboratory, and Lawrence Livermore National Laboratory (Main Site and Site 300).

Cleanup 34 of the remaining 36 smaller geographic sites by 2006, including the Uranium Mill Tailings Remedial Action (UMTRA) Project.

Accelerate cleanup at the remaining 7 large sites (Hanford, Savannah River, Idaho, Oak Ridge Reservation, Los Alamos National Laboratory, Nevada Test Site, and Paducah) where overall completion will not be achieved by 2006, and ramp up disposal operations at the Waste Isolation Pilot Plant (WIPP) to facilitate this accelerated cleanup.

Remediation progress will be measured by completion of release sites (i.e., discrete areas of contamination) and facilities (i.e., contaminated structures) that will ultimately lead to the completion of the entire geographic site. **(EM)**

" *Success will be measured in FY 1998 by:*

- ! *Completing remediation at 6 geographic sites. This will bring the total number of completed geographic sites to 66 out of a total of 113 contaminated geographic sites*[2].

[1]Fifty-three geographic sites remain to be cleaned up as of the beginning of FY 1998. This includes the addition of WIPP which is a disposal site. (As of the end of FY 1996, 83 remaining geographic sites required cleanup. In FY 1997, 10 geographic sites were completed. In addition, in FY 1998 Congress directed the transfer of the FUSRAP Program (21 remaining sites) to the Army Corps of Engineers.

[2]These totals do not reflect efforts that are currently underway to revoke designation of two UMTRA sites, which will decrease the inventory by two.

- ! *Making progress on release site completion:*
  - *Completing about 575 release site assessments.*
  - *Completing about 280 release site cleanups. This will bring the number of completed release site cleanups to approximately 4,130 out of a total inventory of about 9,300 release sites.*
- ! *Making progress on facility decommissionings:*
  - *Completing about 90 facility decommissioning assessments.*
  - *Completing about 70 facility decommissionings. This will bring the number of completed facility decommissionings to approximately 520 out of a total inventory of about 2,950 facilities.*

EQ2-2 and EQ2-3 [Combined with EQ2-1]

EQ3: *Safely and expeditiously dispose of waste generated by nuclear weapons and civilian nuclear research and development programs and make defense high-level radioactive wastes disposal-ready.*

EQ3-1 OPENING THE WASTE ISOLATION PILOT PLANT

Declare the Waste Isolation Pilot Plant (WIPP) geologic repository open for disposal of transuranic wastes in May 1998 (subject to regulatory approval) and maximize timely shipment of waste from DOE sites. **(EM)**

" *Success will be measured in FY 1998 by shipping between 388 and 592 cubic meters of transuranic (TRU) waste to WIPP for disposal from three DOE sites (Los Alamos National Laboratory, Rocky Flats Environmental Technology Site, and Idaho National Engineering and Environmental Laboratory).*

EQ3-2 MAKING DISPOSAL READY AND DISPOSING OF WASTE GENERATED DURING PAST AND CURRENT DOE ACTIVITIES

Safely and expeditiously make disposal-ready and dispose of waste generated during past and current DOE activities. **(EM)**

" *Success will be measured in FY 1998 by:*
- ! *Disposing of about 4,000 cubic meters of mixed low level waste (MLLW).*
- ! *Disposing of about 30,000 cubic meters of low level waste (LLW).*
- ! *Producing 200 canisters of high level waste (HLW) at the Defense Waste Processing Facility (DWPF) at the Savannah River Site.*
- ! *Producing approximately 88 canisters of HLW at the West Valley Demonstration Project.*

EQ4: *Prevent future pollution.*

EQ4-1 PREVENTING FUTURE POLLUTION

Incorporate pollution prevention, including waste minimization, recycling and reuse of materials, into all DOE activities. **(EM, DP, NE, ER)**

" *Success will be measured in FY 1998 by:*
- ! *Reducing routine waste generation by 40 percent, compared with 1993 waste generation rates. [Data for reporting will be available at the end of calendar year 1998] (EM)*
- ! *Reducing/avoiding the generation of radioactive, mixed, and hazardous wastes by about 4,000 cubic meters. [Data for reporting will be available at the end of calendar year 1998] (EM)*

EQ5: *Dispose of high level radioactive waste and spent nuclear fuel in accordance with the Nuclear Waste Policy Act as amended.*

EQ5-1 CONTINUING WITH YUCCA MOUNTAIN SITE CHARACTERIZATION

Complete the scientific and technical analyses of the Yucca Mountain site, and if it is determined to be suitable for a geologic repository, obtain a license from the Nuclear Regulatory Commission. **(RW)**

" *Success will be measured in FY 1998 by completing the viability assessment analyses for licensing and constructing a geologic repository at the Yucca Mountain site. The assessment will consist of four key components:*
- *A design and operational concept of the repository;*
- *An assessment of the performance of that concept in the geologic setting;*
- *A plan and cost estimate to construct and operate the repository; and*
- *A plan and an estimate of the costs to complete a license application.*

EQ5-2 DEVELOPING WASTE ACCEPTANCE AND TRANSPORTATION CAPABILITY

Maintain the capability to respond to potential statutory direction that may include transportation of spent nuclear fuel and high level waste to a designated interim storage facility. **(RW)**

" *Success will be measured in FY 1998 by:*
- ! *Completing generic, non-site-specific interim storage facility work and addressing long lead-time issues related to storage of waste including design, engineering, and safety analyses.*
- ! *Developing a market-driven approach that uses private sector management and operational capabilities to provide waste acceptance, and transportation services. Issuing a revised draft request for proposals.*
- ! *Completing a revised Policy and Procedure for implementation of Section 180(c) of the Nuclear Waste Policy Act.*

EQ6: *Reduce the life-cycle costs of environmental cleanup.*

EQ6-1 REDUCING ENVIRONMENTAL CLEANUP COSTS THROUGH ENHANCED PERFORMANCE

Significantly enhance performance, increase efficiency and reduce costs through increased use of fixed-price competitive contracting, optimized project sequencing, recycling and other waste minimization techniques, privatization, systems engineering, and benchmarking. **(EM)**

" *Success will be measured in FY 1998 by:*
- ! *Achieving productivity enhancement targets (Targets to be established as part of the Accelerating Clean-up: Focus on 2006).*
- ! *Increasing the dollar value and/or number of competitively awarded fixed price contracts, including privatization contracts. Continuing the development of the privatization strategy by:*
  - *Awarding the Oak Ridge Transuranic Waste Treatment Privatization contract;*
  - *Authorizing commencement of the Tank Waste Remediation System (TWRS) contract Phase 1B at Hanford Site in Washington; and*
  - *Awarding the Carlsbad Area Office Contact-Handled Transuranic Waste Transportation Privatization Contract.*

EQ6-2 DEVELOPING AND DEPLOYING INNOVATIVE CLEANUP TECHNOLOGIES

Develop and deploy innovative environmental cleanup, nuclear waste, and spent fuel treatment technologies that reduce cost, resolve currently intractable problems, and/or are more protective of workers and the environment. **(EM)**

" *Success will be measured in FY 1998 by:*
- ! *Accomplishing 49 innovative technology deployments.*
- ! *Demonstrating 35 alternative technology systems that meet the performance-specification based needs as identified by the Site Technology Coordinating Groups (STCG).*

- ! *Making 40 alternative technology systems available for implementation with full cost and engineering performance data.*
- ! *Completing the final Programmatic Environmental Impact Statement for selecting the long-term management strategy for the depleted UF_6. (NE)*

EQ6-3 COMPLETING DEACTIVATION OF SURPLUS FACILITIES

Reduce operating costs by completing deactivation of surplus facilities and placing them in a safe and environmentally sound condition, requiring minimal surveillance and maintenance. **(EM)**

" *Success will be measured in FY 1998 by completing about 60 surplus facility deactivations.*

EQ7: *Maximize the beneficial reuse of land and effectively control risks from residual contamination.*

EQ7-1 MAKING DOE LANDS AND FACILITIES AVAILABLE FOR OTHER USES

In conjunction with stakeholders, develop comprehensive land use plans for DOE sites that provide information on alternative uses, ownership, environmental requirements, and implementation schedules. **(FM)**

" *Success will be measured in FY 1998 by:*
- ! *Submitting to Congress a future use plan for DOE sites, and an analysis of related long-term stewardship issues by October 1998. The plan and analysis will include the Hanford Site, Savannah River Site, Rocky Flats Environmental Technology Site, and Idaho National Engineering and Environmental Laboratory.(EM)*
- ! *Initiating mission justification analysis and providing a schedule for reporting on the amount of excess land and facilities at each site by July 30, 1998.*